Technology Fact Sheet for Mitigation

G. Transmission Lines Upgrade[i]

Sector: Energy	
Subsector: Power	
Technology characteristics	
Introduction	To increase the transmission line voltage to 220kV thus reducing the transmission line copper loss.
Technology characteristics/highlights	• Transmission lines are around 1427 km long. • Voltage levels are 66, 150, 220, and 400kV. • Completing the 220kV network will reduce technical losses by 1%.
Institutional and organizational requirements	All technical and legal aspects have been accounted for.
Operation and maintenance	Nothing additional will be required.
Endorsement by experts	Some politicians/experts are opposing the installation of the 220-kV link in Mansourieh due to the risk of exposure to magnetic fields.
Scale/Size of beneficiaries group	The whole power network will benefit.
Disadvantages	Public opposition due to risks associated with magnetic fields from the HV cables.
Capital costs	
Cost to implement technology	USD 1million
Additional cost	USD1million, (lump sum) according to MOEW policy, to include costs of posts and cables, and labor.
Development impacts, direct and indirect benefits	
Direct benefits	• 1% increase in network efficiency. • Ability to connect to the regional network.
Reduction of vulnerability to climate change, indirect	Loss reduction and GHG emissions reduction.
Economic benefits, indirect	More efficient network with lower losses.
Environmental benefits, indirect	Increased efficiency leads to GHG emissions reduction.
Local context	
Opportunities and Barriers	Public opinion has been objecting and has managed to delay the Mansourieh connection so far.
Timeframe	Short term
Acceptability to local stakeholders	Divided opinion due to public objection.

[i] **This fact sheet has been extracted from TNA Report – Technology Needs Assessment Reports For Climate Change Mitigation – Lebanon. You can access the complete report from the TNA project website http://tech-action.org/**